EXTENSION FOLDER 22
Revised January 1957

1957
VARIETIES
of
FARM CROPS

●

"RECOMMENDED"

"NOT ADEQUATELY TESTED"

"NOT RECOMMENDED"

●

Crop Varieties

Tested by Minnesota

Agricultural Experiment Station

UNIVERSITY OF MINNESOTA
Agricultural Extension Service
U. S. DEPARTMENT OF AGRICULTURE

Varieties
of Farm Crops

THE CHIEF characteristics of the more important and more commonly encountered varieties of farm crops grown in Minnesota are presented in tables in this folder. The varieties are included in three classes, i.e., (1) recommended for Minnesota, (2) not adequately tested in Minnesota, and (3) not recommended for Minnesota.

Recommended Varieties

Recommended varieties have been proved superior to other varieties in carefully conducted comparative tests. Trial plots are grown at the central station, at the branch experiment stations, in individual farmer's fields and in cooperation with county organizations in southwestern and in extreme north central Minnesota. In addition, the varieties are tested for disease resistance in the greenhouse and in special disease nurseries at St. Paul. Varieties of wheat, barley, flax, and soybeans are tested also in the laboratory for acceptability for industrial uses.

Except in unusual circumstances, a variety must have been tested in Minnesota for a minimum of three years before it is considered for recommendation. New varieties that were developed in other states or in Canada may be brought into the state for seed production and for use on farms before the three years of tests can be completed. Such varieties are listed as "not adequately tested." Information now available regarding these varieties is presented but no conclusions are drawn regarding their suitability under Minnesota conditions.

The list of recommended varieties is determined each year at the Experiment Station Crops Conference. Participating in this conference are: staff members of the Departments of Agronomy and Plant Genetics, Plant Pathology and Botany, Agricultural Biochemistry, Entomology and Economic Zoology, and Soils; representatives of Agricultural Extension; the superintendents and agronomists of the branch experiment stations at Waseca, Morris, Crookston, Grand Rapids, Duluth, and Rosemount; and representatives of the Minnesota Crop Improvement Association.

Varieties Eligible for Certification

For many years certication by the Minnesota Crop Improvement Association has been almost entirely limited to varieties on the recommended list. Recognizing certain needs not provided for by this system, the Minnesota Crop Improvement Association now extends certification to certain other varieties.

In general these certifiable varieties are of two kinds: (1) new varieties developed in other states or Canada that have not yet been adequately tested in Minnesota, and (2) nonrecommended varieties of which Minnesota seed growers wish to produce seed for export to other states where these varieties are recommended.

For further information, write to the Minnesota Crop Improvement Association. And remember that *certification does not always imply recommendation.*

Maturity Regions in Minnesota

For small grains and flax, Minnesota may be divided into four regions: (1) southern, (2) central, (3) northwestern, and (4) cutover (see figure 1).

The southern region lies south of a line drawn east and west through St. Paul. The central region lies

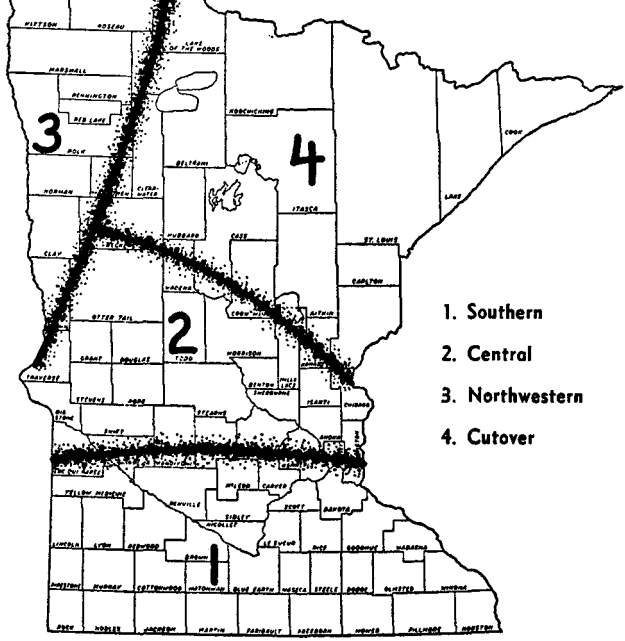

Fig. 1. Small grain and flax regions in Minnesota

between the southern region and a line drawn through Mille Lacs and Detroit Lakes. The northwestern region lies north of the central region and west of a line drawn from Baudette to Detroit Lakes. The cutover region lies north of the central region and east of the northwestern region.

The corn-growing area of Minnesota has been divided into six maturity zones (see figure 2). Days to maturity for corn refers to the approximate number of days of growing season that may be expected, on the average, from emergence of the seedlings to that stage when the moisture in the ears on the standing plants is about 40 per cent. At this time the kernels are well dented.

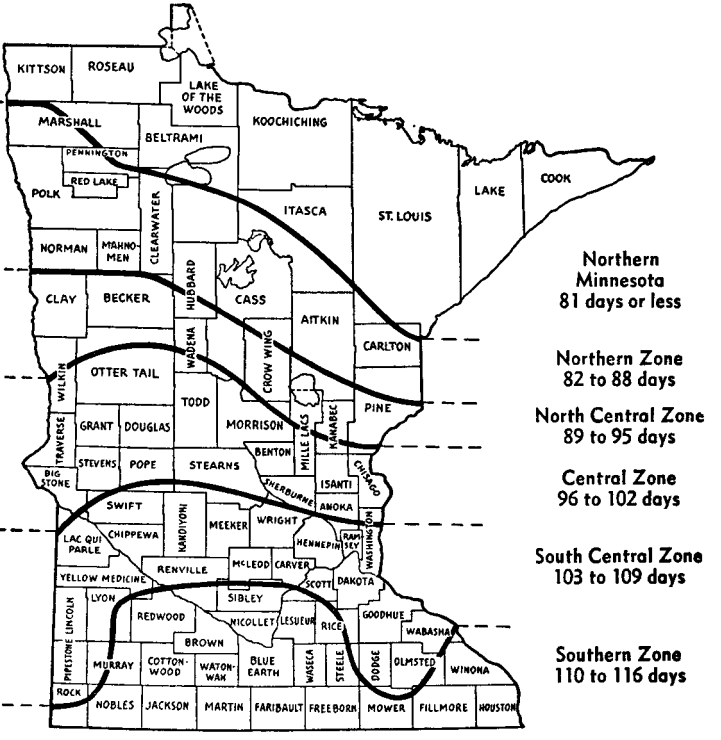

Fig. 2. Corn maturity zones in Minnesota

In the following tables, recommended varieties are suitable for all areas of the state where the crop is grown and for all purposes for which the crop is used, except where it is stated otherwise.

Disease Resistance

The following symbols are used to indicate degrees of resistance or susceptibility to disease: I = immune; R = resistant; MR = moderately resistant; MS = moderately susceptible; S = susceptible.

Oats

All varieties are recommended for all areas of the state where oats are grown.

Among the recommended varieties of oats, Garry is resistant to all known races of stem rust, while Minland and Rodney are resistant to all except 7A. Other varieties are resistant either to race 7 (indicated in the table as R7) or race 8 (R8) of stem rust. Varieties resistant to race 7 are also resistant to races 1, 2, 3, 5, 7A, and 12. Varieties resistant to race 8 are also resistant to races 1, 2, 5, 9, 10, and 11. Ransom also is resistant to all known races of stem rust and Burnett resistant to all except 7A.

All recommended varieties—except Minland, which is resistant to all prevalent North American races of crown rust—are resistant only to certain races of crown rust while being susceptible to other common races. Bentland, Clintland, Clintafe, and Fayette also are resistant to all prevalent North American races.

Oats . . .

Variety	Yield	Plant height	Maturity	Lodging resistance	Seed color	Seed size	Bushel weight	Per cent hull	Disease resistance: Stem rust	Disease resistance: Crown rust	Disease resistance: Smut
Varieties recommended											
Ajax	High	Tall	Medium	Medium	White	Medium	Medium	Medium	R7	S	S
Andrew	Medium	Medium	Early	Good	Yellow	Medium	Medium	Low	R7	S	R
Branch	High	Tall	Late	Medium	White	Medium	Medium	High	R7	MS	R
Garry	High	Tall	Late	Good	Yellow-white	Large	Medium	Medium	R	MS	R
Minland	Medium	Medium	Early	Good	Light-brown	Medium	Low	Low	R	R	R
Rodney	High	Tall	Late	Good	Yellow-white	Large	High	High	R	MS	R
Sauk	High	Tall	Late	Medium	Yellow	Large	Medium	Medium	R7	MS	R
Varieties not adequately tested											
Beedee	Medium	Medium	Medium	Medium	Brown-white	Large	Medium	.....	R7	MS	R
Bentland	Medium	Medium	Medium	Medium	Yellow	Medium	Medium	.....	R8	R	R
Burnett	Good	Medium	Medium	Good	Yellow-white	Large	Medium	.....	R	MS	R

Oats (continued) . . .

Varieties not adequately tested											
Clarion	Medium	Medium	Medium	Medium	Yellow	Large	High	.....	R7	S	R
Fayette	Medium	Medium	Early	Medium	Yellow	Large	Medium	.....	R7	R	R
Newton	Medium	Medium	Medium	Good	Brown-yellow	Large	Medium	.....	R7	MS	R
Ransom	Medium	Medium	Early	Good	Yellow	Medium	Medium	.....	R	MS	R
Simcoe	Good	Tall	Medium	Medium	Yellow-white	Large	Medium	.....	R7	S	S
Varieties not recommended											
Abegweit	Medium	Tall	**Late**	**Poor**	White	Large	Low	.....	R7	S	S
Benton	**Low***	Tall	Medium	**Medium**	Yellow	Medium	Medium	Low	R8	S	R
Bonda	**Low**	Medium	Medium	Good	Yellow-white	Large	High	Medium	R8	S	R
Bonham	**Low**	Medium	Early	**Medium**	Yellow-white	Large	Medium	.....	R8	S	R
Cherokee	**Low**	Short	Early	Good	Yellow	Large	Medium	Medium	R8	S	R
Clintafe	**Low**	Medium	Medium	Good	Yellow	**Small**	Medium	Medium	R8	R	R
Clintland	**Medium**	Medium	Medium	Good	Yellow	Medium	High	Low	R8	R	R
Clinton	**Low**	Medium	Medium	Good	Yellow	Medium	Medium	Low	R8	S	R
Colo	**Low**	Medium	Medium	**Medium**	Yellow-white	Large	Medium	Low	R8	S	R
Craig	**Low**	Medium	**Late**	Good	White	Large	Medium	.....	S	S	R
Gopher	**Medium**	Medium	Medium	**Medium**	White	**Small**	Medium	Medium	S	S	S
Jackson†	**Medium**	Medium	Medium	Good	Yellow	Medium	Medium	.....	R7	S	R
James	**Low**	Medium	Medium	Good	Brown-white	**Small**	High	Hull-less	R8	S	R
La Salle	**Low**	Medium	Early	**Medium**	Yellow-white	Medium	Medium	.....	R8	S	R
Mo-0-205	Medium	Medium	Medium	Good	**Gray-red**	**Small**	High	Low	R7	MS	R
Mindo	**Low**	**Short**	**Early**	**Good**	**Yellow**	**Medium**	Medium	Medium	R8	S	R
Nemaha	**Low**	Short	Early	**Good**	**Yellow**	Large	Medium	Medium	R8	S	R
Shelby	**Medium**	Medium	**Late**	**Medium**	Yellow-white	Large	High	Medium	R8	S	R
Waubay†	**Medium**	Medium	Medium	Good	Yellow	Large	High	Medium	R7	S	R

* Characteristics in bold type indicate important shortcomings of variety.

† Jackson and Waubay, resistant to race 7, have been lower in yield than recommended varieties with resistance to race 7.

Rye

Variety	Yield	Winter hardiness	Maturity	Height	Lodging resistance	Seed size	Bushel weight	Forage growth	
								Fall	Early spring
Varieties recommended									
Adams	High	Good	Medium	Tall	Medium	Medium	High	Medium	High
Caribou	High	Very good	Medium	Tall	Medium	Small	High	Low	High
Varieties not adequately tested									
Dominant	High	**Fair†**	Late	Medium	Good	Medium	Medium	Medium	High
King's II	High	**Fair**	Late	Medium	Good	Small	**Low**	Medium	High
Sangaste	Medium	Good	Late	Tall	Good	Medium	Medium	High	High
Von Rumker	High	**Fair**	Late	Tall	Good	Medium	**Low**	Low	High
Varieties not recommended									
Antelope‡	High	Very good	Medium	Tall	Medium	Small	High	Low	High
Balbo	**Low**	**Poor**	Early	Tall	Good	Small	Medium	High	**Low**
Dakold	**Low**	Very good	Medium	Tall	Medium	Small	High	Low	High
Dakold 23	Medium	Very good	Medium	Tall	Medium	Small	High	Low	High
Emerald	Medium	Very good	Medium	Tall	**Poor**	Small	Medium	Medium	High
German	**Low**	**Fair**	Medium	Tall	Medium	Medium	Medium	Low	High
Horton	**Low**	Good	Early	Tall	Medium	Small	High	High	High
Imperial	Medium	Good	Medium	Tall	Medium	Medium	Medium	Medium	High
Pierre	Medium	Very good	Early	Tall	Good	Small	High	Low	High
Prolific Spring	**Very low**	.....	**Very late**	Short	Good	Small	**Low**	.....	**Low**
Tetra Petkus	Medium*	**Poor**	**Very late**	Tall	Very good	**Large**	**Very low**	Medium	**Low**
White Soviet	**Low**	Good	Medium	Tall	Medium	Medium	Medium	Low	High

* Yields of Tetra Petkus are adversely affected by pollen from other rye varieties and vice versa. Therefore fields should be at least 100 feet from other rye varieties to get maximum yields. Isolation of large fields is not so important as it is for small plots. For seed certification, fields must be at least 660 feet from any other rye variety.

† Characteristics in bold type indicate important shortcomings of variety.

‡ Antelope cannot be distinguished from Caribou, except that in Minnesota trials it has yielded slightly less.

Flax

Variety	Yield	Maturity	Plant height	Seed size	Color		Oil		Diseases		
					Seed	Flower	Content	Quality	Rust*	Wilt	Pasmo
Varieties recommended											
B5128	High	Late	Medium	Medium	Brown	Blue	Medium	Low	I	MS	S
Marine	Medium	Early	Medium	Small	Brown	Blue	Medium	High	I	R	MS
Redwood	High	Late	Medium	Medium	Brown	Blue	Medium	Medium	I	MR	S
Varieties not recommended											
Bison	Medium	Medium	Medium	Medium	Brown	Blue	Medium	**Low†**	**S**	R	S
B. Golden	Medium	Medium	**Short**	Medium	Yellow	Pink	Medium	Medium	I	**MS**	**VS**
Crystal	Medium	Medium	Medium	Medium	Yellow	White	Medium	Medium	I	**MS**	MS
Dakota	**Low**	Medium	Medium	Medium	Brown	Blue	Low	Medium	**S**	R	S
De Oro (C.I.977)	Medium	**Late**	Medium	Medium	Yellow	Pink	Medium	**Low**	I	MR	**VS**
Koto	Medium	Medium	Medium	Medium	Brown	Blue	Medium	Medium	**S**	R	S
Linda	Medium	Medium	Medium	Large	Brown	Blue	Medium	**Low**	R	R	S
Minerva	Medium	**Late**	Medium	Medium	Yellow	Blue	High	Medium	R	MR	MS
Norland	High	**Late**	Medium	Large	Brown	White	Medium	Medium	R	**MS**	**S**
Raja	Medium	Early	Medium	Medium	Brown	Blue	**Low**	**Low**	R	MR	S
Redwing	Medium	Early	Medium	Small	Brown	Blue	**Low**	High	**S**	R	S
Rocket	Medium	Medium	Medium	Medium	Brown	Blue	Medium	Medium	R	R	S
Royal	Medium	Medium	Medium	Medium	Brown	Blue	Medium	**Low**	MR	**MS**	S
Sheyenne	**Low**	Early	Short	Small	Brown	Blue	Medium	Medium	I	R	MS
Victory	Medium	Medium	Medium	Large	Brown	White	Medium	Medium	MR	**MS**	**VS**
Viking	Medium	Medium	Medium	Medium	Yellow	Pink	Medium	Medium	I	**MS**	**VS**

* Varieties marked I are immune to all races of rust found in Minnesota. The occasional rusted plants found in immune varieties are the result of mechanical mixing or natural crossing.

† Characteristics in bold type indicate important shortcomings of variety.

Spring Wheat

Variety	Regions	Yield	Date mature	Plant height	Resistance to lodging	Awn type	Bushel weight	Quality	Stem rust	Leaf rust	Bunt	Loose smut	Scab
Varieties recommended													
BREAD WHEATS													
Lee	All	Medium	Early	Short	Medium	Bearded	High	Satisfactory	S	R	S	S	S
Selkirk	All	High	Medium	Medium	Medium	Beardless	Medium	Satisfactory	MR	MR	R	R	S
DURUMS													
Langdon	2,3	High	Early	Medium	Medium	Bearded	High	Satisfactory	R	MR	R	R	S
Ramsey	2,3	Medium	Medium	Medium	Poor	Bearded	Medium	Satisfactory	MR	R	R	R	S
Varieties not adequately tested													
BREAD WHEATS													
Conley*		High	Late	Tall	Medium	Bearded	Medium	Satisfactory	R	MS	R	MR	S
Russell†		High	Medium	Tall	Medium	Bearded	Medium	Unsatisfactory	S	S	R	MS	S
DURUMS													
Towner		Medium	Late	Tall	Poor	Bearded	High	Satisfactory	R	R	R	R	S
Yuma		Low	Medium	Short	Medium	Bearded	Medium	Satisfactory	R	R	R	R	S
Varieties not recommended													
BREAD WHEATS													
Apex		**Low‡**	Medium	Short	Medium	Beardless	Low	**Unsatisfactory**	S	S	R	R	S
Cadet		**Low**	Late	Medium	Medium	Beardless	Low	Satisfactory	S	S	R	R	S
Ceres		**Low**	Medium	Tall	Poor	Bearded	Low	Satisfactory	S	S	S	S	S
Henry		Medium	Medium	Tall	Medium	Bearded	Medium	**Unsatisfactory**	S	MS	MS	S	S
Mida	2,3	**Low**	Medium	Tall	Medium	Bearded	High	Satisfactory	S	S	MS	S	S
Newthatch		**Low**	Medium	Medium	Medium	Beardless	Low	Satisfactory	S	S	R	R	S

Spring Wheat (continued) . . .

Variety	Regions	Yield	Date mature	Plant height	Resistance to lodging	Awn type	Bushel weight	Quality	Stem rust	Leaf rust	Bunt	Loose smut	Scab
Varieties not recommended (continued)													
Pilot	.....	**Low**	Medium	Tall	Poor	Bearded	Low	Satisfactory	S	S	.....	.....	S
Premier	.....	**Low**	Medium	Medium	Medium	Bearded	Low	**Unsatisfactory**	S	S	MR	S	S
Redman	.....	**Low**	Early	Medium	Medium	Beardless	Low	Satisfactory	S	S	.....	R	S
Regent	.....	**Low**	Early	Medium	Medium	Beardless	Low	Satisfactory	S	S	.....	.....	S
Rescue	.....	**Low**	Medium	Medium	Poor	Beardless	Low	**Unsatisfactory**	S	S	.....	.....	S
Rival	.....	**Low**	Medium	Tall	Poor	Bearded	Low	Satisfactory	S	S	.....	MR	MS
Rushmore	.....	**Low**	Early	Medium	Medium	Beardless	High	Satisfactory	S	S	MR	MR	S
Spinkota	.....	**Low**	Medium	Tall	Poor	Bearded	High	**Unsatisfactory**	S	S	S	R	S
Thatcher	.....	**Low**	Medium	Medium	Medium	Beardless	Low	Satisfactory	S	S	R	R	S
DURUMS													
Carleton	.....	**Low**	Late	Tall	Medium	Bearded	Medium	Satisfactory	S	R	MS	MS	S
Mindum	.....	**Low**	Medium	Tall	Poor	Bearded	High	Satisfactory	S	R	R	R	S
Nugget	.....	**Low**	Early	Short	Medium	Bearded	Low	Satisfactory	S	R	MS	R	S
Sentry	2,3	Medium	Early	Short	Medium	Bearded	High	Satisfactory	MS	R	R	R	S
Stewart	.....	**Low**	Medium	Tall	Poor	Bearded	High	Satisfactory	S	R	R	R	S
Vernum	.....	**Low**	Early	Tall	Poor	Bearded	Low	Satisfactory	S	R	R	R	S

* Conley is susceptible to head blight complex.

† Russell was released as a feed wheat in Wisconsin in 1956.

‡ Characteristics in bold type indicate important shortcomings of variety.

Seeding Tables

Crop	Bushel weight (in lb.)	Seeding rate* (seeding per acre)	Date of seeding	Remarks
BARLEY†	48	2 bu. (96 lb.)	Seed as early as possible	Plow stubble if following corn
CORN†	56	8-14 lb.	Early May	Select proper planter plates, 12,000 plants in light soil; 16,000 in heavy soil
FLAX†	56	¾-1 bu.	After danger of heavy frost is past	Sow on clean land, firm seedbed
FORAGE GRASSES (perennial)				
Bromegrass (with legumes)	14	5-8 lb.	Early spring or fall	Upland grasses should always be sown in mixture with legumes, except for seed
Meadow fescue (in mixture with brome and legume)	14-24	3-4 lb.	Early spring or fall	
Timothy (with legumes)	45	4-6 lb.	Early spring or fall	
In mixture with brome and legume or reed canary		2-4 lb.		
Reed canary	44-48			
Alone or with timothy		6-8 lb.	Early spring or fall; after freeze-up	
FORAGE LEGUMES (biennial or perennial)				
Alfalfa	60		With companion grain or flax, early spring; or alone before August 10	Always inoculate
Alone		8-12 lb.		
With grasses		5-8 lb.		
Birdsfoot trefoil	60	3-6 lb.	Seed as early as possible	Not generally recommended. Use in simple mixtures only. Does not tolerate competition. Always inoculate
Clover	60		Seed as early as possible	Always inoculate. Use clovers in mixture with grass and/or other legumes.
Red (in mixture)		4-8 lb.		
Alsike (in mixture)		2-4 lb.		
Ladino (in mixture)		½-1 lb.		Seed Ladino 2-3 lb. for hog or poultry pasture
Sweet clover	60			Always inoculate
Alone		10-12 lb.		
In mixture		2-4 lb.		
OATS†	32	2-2½ bu.‡ (64-80 lb.)	Early spring	Reduce oat seeding when underseeded with legume or grass
RYE	56	1¼-2 bu.‡ (70-112 lb.)	August 1 to October 1	Increase seeding rate for large-seeded varieties
SORGHUM†	50		In warm soil, May to July	Use in S, SC, C§ corn zones. Drill in 6-inch rows
Corn planter rows		4-8 lb.		
"Solid" drilled		25-30 lb.		
With 1½ bu. soybeans		15 lb.		
SUDANGRASS	40		In warm soil, May to July	Use in S, SC, C§ corn zones. Use as forage drilled in 6-inch rows
Alone		25-30 lb.		
With 1½ bu. of soybeans		10 lb.		
SOYBEANS†	60		S, SC, C§ zones, May 10; N, NC§ zones, June 10. In warm soil, May 15 to 30	Always inoculate just before planting. Decrease seeding rate for small-seeded varieties
"Solid" drilled		120 lb.		
40-inch rows		60 lb.		
20-inch rows		90-100 lb.		
WHEAT†	60		Early spring on bread and durum wheats	Plow stubble if following corn
Bread and durum		1-1½ bu. (60-90 lb.)		
Winter		1-2 bu. (60-120 lb.)	August 1 to October 1	Not adapted to all of Minnesota
MISCELLANEOUS CROPS				
Field peas†	60		Early spring	Resistance to spring frost
Alone		120-150 lb.		
With 1-2 bu. of oats		30-90 lb.		
Sunflowers		4-8 lb.	May 10-25	Find market before growing
Millet	48	25-35 lb.	May and June	Use in N, NC§ corn zones.
Rape	50	4-6 lb.	Early spring	Poultry and hog pasture
Buckwheat	50	50 lb.	Midseason	Supplemental or emergency crop

* High-quality seed; good bushel weight and high germination; if poor quality seed, increase seeding rate. Recommendations are based on medium seed size and average seedbed preparation. † Use fungicide seed treatment. ‡ When sown for pasture, use the higher seed rate.
§ N—Northern Zone; NC—North Central Zone; C—Central Zone; SC—South Central Zone; S—Southern Zone. (Refer to the map, figure 2.)

Winter Wheat

Variety	Yield	Date mature	Plant height	Resistance to lodging	Winter hardiness	Awn type	Bushel weight	Quality	Stem rust*	Leaf rust
Varieties recommended										
Minter	High	Early	Medium	Medium	High	Bearded	High	Satisfactory	S	S
Minturki	Medium	Early	Medium	Medium	High	Bearded	Medium	Satisfactory	S	S
Varieties not recommended										
Blackhawk	Medium	Medium	Tall	Medium	**Medium†**	Bearded	Medium	Satisfactory	S	R
Iobred	**Low**	.....	.....	.....	**Low**	.....	.....	.....	S	S
Iohardi	**Low**	Early	Medium	Medium	Medium	Bearded	High	Satisfactory	S	S
Iowin	.....	.....	.....	.....	**Low**	.....	.....	.....	S	S
Kanred	.....	.....	.....	**Poor**	**Low**	Bearded	.....	.....	S	S
Marmin	Medium	Medium	Medium	Medium	Medium	Bearded	Medium	**Unsatisfactory**	S	S
Minhardi	**Low**	Medium	Medium	Medium	High	Beardless	Medium	Satisfactory	S	S

* All varieties are susceptible to stem rust race 15B.

† Characteristics in bold type indicate important shortcomings of variety.

Soybeans

The map of corn maturity zones is used to indicate the areas of adaptation for the soybean varieties. Obviously certain varieties have wider adaptation than others, although a variety which is early in the southernmost zone indicated will probably be relatively late in the northernmost zone indicated.

Evaluations in the table for yield are relative and should be interpreted in terms of the maturity zones where best adapted. The maturity zones listed for each variety are in order of what is considered to be the best adaptation of the variety. Thus Blackhawk can be produced successfully in both the Southern and South Central Zones but is probably best adapted to the Southern Zone.

Soybeans . . .

Variety	Zone(s)* where adapted	Yield	Maturity	Plant height	Resistance to lodging	Seed size	Oil content
Varieties recommended							
Acme	N, NM	Medium	Very early	Short	Good	Medium	Medium
Blackhawk	S and SC	High	Medium	Tall	Good	Medium	High
Capital	SC, C, S, NC	High	Early	Medium	Medium	Small	High
Chippewa	SC, S, C	High	Medium early	Tall	Very good	Medium	High
Flambeau	C, NC, N	Medium	Very early	Short	Medium	Medium	Medium
Grant	C, SC, S, NC	High	Early	Medium	Good	Medium	High
Harosoy	S	High	Medium-late	Tall	Medium	Large	Medium
Norchief	NC, C	High	Early	Short	Good	Medium	High
Ottawa Mandarin	C, SC, S, NC	High	Early	Short	Very good	Large	Medium
Renville	SC, S, C	Medium	Medium early	Medium	Very good	Medium	Very high
Varieties not adequately tested							
Comet			Early	Medium	Good	Medium	Medium
Varieties not recommended							
Bavender Special		**Low†**	**Very late**	Very tall	**Very poor**	Medium	**Low**
Earlyana		Medium	Medium	Tall	**Poor**	Medium	Medium
Harbaro		High	Medium	Medium	Medium	Large	**Low**
Hardome		Medium	Early	Tall	**Poor**	Medium	Medium
Harman		Medium	**Late**	Tall	**Poor**	Medium	**Low**
Hawkeye		Medium	**Late**	Tall	Good	Medium	High
Korean		High	Medium-late	Tall	**Poor**	**Very large**	Medium
Lincoln		**Low**	**Very late**	Tall	Medium	Medium	High
Manchu, Wis. 606		High	Medium	Medium	**Poor**	Medium	High
Mandarin, Wis. 507		**Low**	Early	Medium	Medium	Medium	**Low**
Monroe		**Low**	Medium early	Very tall	Medium	Small	Medium
Pridesoy 57		**Low**	Very early	Short	Good	Medium	**Low**

* See map of corn maturity zones, figure 2.

† Characteristics in bold type indicate important shortcomings of variety.

Field Corn

The Minnesota Agricultural Experiment Station has discontinued the practice of recommending open-pedigree corn hybrids. For information on the important characteristics of hybrid field corn varieties sold in the state the reader is referred to the following publications of the Minnesota Experiment Station.

Miscellaneous Report 20, "Maturity Ratings of Corn Hybrids in Minnesota." This report lists the maturity rating in days for each hybrid offered for sale in the state. Approximately 675 differently named hybrids are registered for sale. About 75 of these are open-pedigree hybrids sold under an experiment station name and number. The remainder are closed-pedigree hybrids sold under a company brand name and number. The Minnesota Experiment Station is required by law to test and rate all of these hybrids for maturity. The maturity rating appears on the tag attached to each bag of seed sold in the state.

Miscellaneous Report 28, "Minnesota Hybrid Corn Performance Trials." This report presents comparative data on both closed and open-pedigree hybrids for yield, ear moisture at harvest, root lodging, stalk breakage, and ear dropping. The closed-pedigree hybrids are those entered voluntarily by seed companies who pay a fee to cover the cost of testing. The open-pedigree hybrids are entered by the Minnesota Agricultural Experiment Station.

Barley

All varieties listed are susceptible to leaf rust. Those indicated as resistant to stem rust have had very little rust in the field, although known to be susceptible to certain races. Those listed as resistant to loose smut are known to be quite susceptible to certain of its less-prevalent races. The spot blotch reactions, though averages of several years, are subject to change with shifts in the prevalence of physiologic races. Of the varieties listed only Moore is definitely susceptible to net blotch. Herta is a two-rowed variety. All others listed are six-rowed.

Barley . . .

Name	Section where recommended	Yield	Plant height	Maturity	Resistance to lodging	Seed size	Bushel weight	Malting quality	Disease reaction: Stem rust	Disease reaction: Spot blotch	Disease reaction: Loose smut
Varieties recommended											
Kindred (L)	All	Medium	Medium	Early	Very poor	Medium	Medium	Very good	R	MS	S
Montcalm	3 and 4	Medium	Tall	Late	Poor	Medium	Medium	Very good	VS	S	S
Peatland	4	Medium	Tall	Late	Good	Small	High	Poor	R	MR	MR
Vantage	All	High	Medium	Medium	Good	Medium	Medium	Poor	R	VS	S
Fox*	All	Medium	Medium	Late	Good	Medium	Medium	.....	R	MS	S
Traill*	All	High	Medium	Medium	Good	Medium	High	.....	R	MS	S
Varieties not adequately tested											
Herta	.....	High	Medium	Late	Good	Medium	High	.....	S	MS	S
Husky	.....	Medium	Medium	Late	Medium	Small	Medium	.....	R	S	S
Parkland	.....	Medium	Medium	Late	Good	Medium	Medium	.....	R	MS	S
Vantmore	.....	Medium	Medium	Late	Good	Small	Medium	.....	R	MS	S
Varieties not recommended											
Barbless	.....	Medium	**Tall**	Late	**Poor†**	**Medium**	Medium	Medium	**S**	**S**	S
Feebar	.....	High	Short	Medium	Very good	Large	**Low**	**Very poor**	R	MS	S
Manchuria	.....	**Low**	Medium	Medium	**Poor**	Medium	Medium	Good	**S**	MS	MS
Mars	.....	Medium	Short	Early	Very good	**Small**	High	**Poor**	R	S	S
Moore‡	.....	Medium	Medium	Late	Good	Medium	Low	**Poor**	R	MS	S
O.A.C. 21	.....	Low	Tall	Medium	Medium	Medium	Medium	Good	**S**	MS	MS
Plains	.....	High	Short	Early	Good	Medium	Medium	**Poor**	R	MS	S
Tregal	.....	High	Short	Medium	Medium	Medium	Medium	**Poor**	**S**	S	R

* Malting quality not yet established. † Characteristics in bold type indicate important shortcomings of variety. ‡ Very susceptible to net blotch.

Sunflowers

Variety	Seed yield	Maturity	Height	Resistance to lodging	Seed: Size	Seed: Bushel weight	Seed: Per cent hull	Seed: Oil content
Varieties recommended								
For feed or oil—Advance	**Medium***	Medium	Short	Very good	**Small**	High	Low	High
For feed only—Arrowhead	High	Early	Short	Good	**Medium**	High	Low	**Medium**
Varieties not recommended								
Beacon†	**Medium**	**Late**	**Medium**	Good	**Small**	High	**High**	**Medium**
Commercial Advance (second generation Advance)	**Low**	Medium	Short	Very good	**Small**	High	Low	High
Greystripe	**Medium**	**Late**	**Tall**	**Medium**	Large	**Low**	**High**	**Low**
Manchurian	**Medium**	**Late**	**Tall**	**Medium**	Large	**Low**	**High**	**Low**
Mennonite	High	Medium	Short	Good	Large	Medium	**High**	**Low**
Sunrise	**Low**	Medium	Short	Good	**Small**	High	Low	High

* Characteristics in bold type indicate important shortcomings of variety.

† Most rust-resistant variety available.

Field Peas or Dry, Edible Peas

Field peas are also used as a forage crop, usually in mixture with oats. Chancellor or Dashaway are the best varieties for this purpose.

Variety	Seed yield	Maturity	Vine length	Seed		
				Size	Bushel weight	Color
Varieties recommended						
Chancellor	High	Medium	Long	Small	High	Cream
Dashaway	High	Medium	Long	Small	High	Cream
Varieties not adequately tested						
O.A.C. 181	High	Early	Long	Medium	Medium	Cream
Varieties not recommended						
Alaska	**Low***	Early	Short	Medium	Medium	Green
Arthur	Medium	Early	Long	**Large**	High	Cream
Austrian	**Low**	Late	Medium	Small	High	**Dark speckled**
Chang	High	Medium	Long	Medium	High	**Cream-black hilum**
Delwiche Early Scotch	**Low**	Early	Short	Medium	Medium	Mottled green
First and Best	Medium	Early	Short	Medium	Medium	Cream
Guinevere	Medium	Medium	Long	**Large**	High	Cream
Late Scotch	Medium	Late	Long	Medium	High	Mottled green
Multiplier	Medium	Late	Long	Small	High	Cream
Valley	Medium	Early	Long	**Large**	Medium	Cream
White Marrowfat	Medium	Late	Long	**Large**	Medium	Cream

* Characteristics in bold type indicate important shortcomings of variety.

Alfalfa

Variety	Forage yield	Winter hardiness	Recovery after clipping	Diseases		
				Bacterial wilt	Common leaf spot	Black stem
Varieties recommended						
Ladak*	High	Good	Slow	R	S	S
Narragansett*†	High	Good	Medium	**S**‡	S	S
Ranger§	Medium	Good	Medium	R	S	S
Vernal¶	High	Good	Medium	VR	S	S
Varieties not adequately tested						
Du Puits	High	**Medium**	Rapid	**S**	.....	S
Varieties not recommended						
Atlantic	Medium	**Medium**	Medium	**S**	S	S
Buffalo	**Low**	**Medium**	Rapid	R	S	S
Canadian Variegated	Medium	Good	Medium	**S**	S	S
Cossack	Medium	Good	Medium	**S**	S	S
Grimm	Medium	Good	Medium	**S**	S	S
Kansas Common	**Low**	**Medium**	Rapid	**S**	S	S
Nomad	**Low**	**Poor**	Medium	**S**	S	S
Rhizoma	Medium	Good	Medium	**S**	S	S
Talent	**Low**	**Poor**	Rapid	**S**	S	S
Williamsburg	**Low**	**Poor**	Rapid	**S**	S	S

* The supply of Narragansett and Ladak is somewhat limited.

† Narragansett recommended only for rotations that include alfalfa for two crop years or less.

‡ Characteristics in bold type indicate important shortcomings of variety.

§ There is an excellent supply of certified seed of Ranger available for 1957.

¶ The supply of certified Vernal seed available for 1957 may be somewhat limited.

Medium Red Clover

Variety	Forage yield	Seed yield
Varieties recommended		
Midland	High	Medium
Wegener	High	Medium
Varieties not recommended		
Commercial*	High	Medium
Dollard†	High	High
Kenland	Medium	Medium

* The information given applies to high quality Minnesota grown commercial.

† Although Dollard appears to be a good variety it is not on the recommended list because of limited seed supply.

Biennial Sweetclover

Variety	Forage yield		Seed yield	Time of maturity second year
	Seedling year	Second year		
Varieties recommended				
Evergreen	High	High	Medium	Very late
Madrid	High	Medium	Medium	Medium
Varieties not recommended				
Commercial white	Medium	Medium	Medium	Medium
Commercial yellow	Medium	Medium	Medium	Medium
Arctic	Low	Low	Low	Early
Alpha	Low	Low	Low	
Brandon Dwarf	Low	Low	Low	Early

Forage yield in the fall of the seedling year is associated with green manure value and lateness the second year would increase the value as pasture.

Damage by the sweetclover weevil has seriously reduced sweetclover acreage in recent years. However, current experiments have demonstrated feasible methods of control.

Smooth Bromegrass

Variety	Forage yield	Seed yield
Varieties recommended		
Achenbach	High	Medium
Fischer	High	Medium
Lincoln	High	Medium
Varieties not recommended		
Canadian Commercial	Medium	Medium
Manchar	High	High

Lincoln is the only recommended variety for which adequate seed supplies are available through Minnesota dealers. Regional cooperative tests have indi-

cated that Achenbach may prove to be adapted to a wider area than Lincoln.

Manchar, a USDA introduction from Manchuria which has undergone mass selection at Pullman, Washington, has proved superior in seed yield in Minnesota and appears to recover more quickly after cutting than the recommended strains. Regional testing had not been extensive enough to warrant recommendation.

Birdsfoot Trefoil

Empire is a variety of broadleaf birdsfoot trefoil grown in New York State. It is relatively winter hardy in Minnesota. Birdsfoot trefoil of Italian origin is being offered for sale at a considerably lower price than Empire, but trials indicate it is not as winter hardy as Empire.

Sudangrass

Piper is more vigorous than commercial types, has a lower level of hydrocyanic acid (HCN) potential, and is more resistant to leaf blight and anthracnose than other varieties. HCN is the glucoside which causes poisoning in livestock. Fewer livestock are poisoned when pastured on Piper sudan than when pastured on commercial types. Caution should still be exercised in grazing sudan.

Timothy

Itasca is a synthetic variety composed of six inbred lines: one from Minnesota commercial seed, two from Cornell No. 1620, and three from Cornell No. 1777. It is superior to commercial timothy in hay production and about equal in seed production, and it matures at about the same time.

Lorain was introduced from Ohio. It blooms, matures, and the leaves stay green six to eight days later than Itasca or commercial timothy. In Minnesota tests, Lorain has been superior to commercial timothy in hay production and somewhat lower in seed production.

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Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension Service and United States Department of Agriculture Cooperating, Skuli Rutford, Director. Published in furtherance of Agricultural Extension Acts of May 8 and June 30, 1914. 30M—11-56